

What is claimed is:

1. A digital content downloading system using a network in which digital content is downloaded, comprising the steps of:

5 making a consumer send both information designating a desired digital content selected by the consumer and a desired digital content transmission condition selected by the consumer to a digital content retailer possessing the desired digital content through a network;

10 making the digital content retailer reserve the network managed by a network operator according to the desired digital content transmission condition sent from the consumer;

15 making the digital content retailer download the desired digital content designated by the information to the consumer through the network reserved by the digital content retailer at the desired digital content transmission condition sent from the consumer;

20 making the digital content retailer collect a charge for the desired digital content, in which a transmission charge corresponding to the desired digital content transmission condition is included, from the consumer; and

making the digital content retailer pay the transmission charge to the network operator.

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2. A digital content downloading system using a network, according to claim 1, wherein the desired digital content transmission condition selected by the consumer is a transmission time condition such as an urgent transmission condition, a date and time specifying transmission

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condition or a date specifying transmission condition.

3. A digital content downloading system using a network,
according to claim 1, wherein the network is composed of
5 a plurality of networks managed by a plurality of network
operators, and the desired digital content transmission
condition selected by the consumer corresponds to a
communication quality of each of the networks.

10 4. A digital content downloading system using a network,
according to claim 3, wherein the communication quality
of each network is determined by one of a data transfer
rate, a delay time, a delay variation, a burst size, a cell
interval and a cell discard rate.

15 5. A digital content downloading system using a network,
according to claim 3, wherein a bandwidth of the network
is reserved with a time condition in the network
reservation according to the desired digital content
20 transmission condition.

6. A digital content downloading system using a network,
according to claim 1, wherein the desired digital content
transmission condition selected by the consumer is a
25 bandwidth guarantee type transmission condition, in which
a transmission time period is guaranteed, or a bandwidth
no-guarantee type transmission conditions, in which a
transmission time period is not guaranteed, and the
transmission charge is heightened as the transmission time
30 period is shortened.

7. A digital content downloading system using a network, according to claim 1, wherein the step of making the digital content retailer download the desired digital content includes:

5 making the digital content retailer check through the network whether or not the consumer has a capability such as a memory capacity for receiving the desired digital content, before the desired digital content is downloaded to the consumer at the desired digital content transmission
10 condition.

8. A digital content downloading system using a network, according to claim 1, wherein the step of making the digital content retailer download the desired digital content
15 includes:

connecting the consumer to the network through a subscriber line which is composed of a telephone line, an optical fiber cable, a coaxial cable or a radio transmission line.

20 9. A digital content downloading system using a network, according to claim 1, wherein the step of making the digital content retailer download the desired digital content includes:

25 making the digital content retailer send a transmission start notice to the consumer before the downloading of the desired digital content;

making the network operator manage a transmission time period in the transmission of the desired digital content
30 until the digital content retailer sends a transmission

completion notice to the network operator;

making the network operator send a time-out notice to the digital content retailer in cases where the transmission time period exceeds a prescribed value; and

- 5 making the digital content retailer forcedly terminate the downloading of the desired digital content in cases where the digital content retailer receives the time-out notice from the network operator.

- 10 10. A digital content downloading system using a network, according to claim 1, wherein the step of making the digital content retailer download the desired digital content includes:

- 15 making the digital content retailer cipher the desired digital content;

making the digital content retailer download ciphered data of the desired digital content; and

- 20 making the consumer decipher the ciphered data of the desired digital content to obtain the desired digital content.

- 25 11. A digital content downloading system using a network, according to claim 1, wherein the step of making the consumer send both the information and the desired digital content transmission condition includes:

making the consumer send personal information and payment information of the consumer to the digital content retailer;

- 30 making the digital content retailer inquire of a credit company whether or not the personal information and the

payment information sent from the consumer is correct;
 making the credit company perform the authentication of
 the consumer according to the personal information and the
 payment information; and

- 5 making the credit company send an authentication notice
 to the digital content retailer in cases where the personal
 information and the payment information is correct.

12. A digital content downloading system using a network,
 10 according to claim 1, wherein the step of making the digital
 content retailer collect a charge for the desired digital
 content includes:

making the digital content retailer send an accounting
 notice corresponding to the charge for the desired digital
 15 content to a credit company;

making the credit company send a bill, which corresponds
 to the charge for the desired digital content, to the
 consumer in response to the accounting notice:

making the consumer pay the charge for the desired
 20 digital content to the credit company in response to the
 bill: and

making the credit company pay the charge paid by the
 consumer to the digital content retailer.

25 13. A digital content downloading system using a network,
 according to claim 1, wherein the step of making the digital
 content retailer download the desired digital content
 includes:

making the consumer send a reception impossible notice
 30 to the digital content retailer in cases where the consumer

fails in receiving the desired digital content;

making the digital content retailer send a transmission termination notice to the network operator; and

making the digital content retailer send a transmission
5 no-completion notice to the consumer.

14. A digital content downloading system using a network,
according to claim 1, wherein the desired digital content
is a music file, a video file or a game software title.

15. A digital content downloading system using a network
in which digital content is downloaded, comprising the
steps of:

making a digital content retailer receive both
15 information designating a desired digital content and a
desired digital content transmission condition from a
consumer;

making the digital content retailer reserve a network
managed by a network operator according to the desired
20 digital content transmission condition sent from the
consumer;

making the digital content retailer download the desired
digital content designated by the information to the
consumer through the network according to the network
25 reservation informed by the network operator;

making the digital content retailer collect a charge for
the desired digital content, in which a transmission charge
corresponding to the desired digital content transmission
condition is included, from the consumer after the
30 downloading of the desired digital content to the consumer

is completed; and

making the digital content retailer pay the transmission charge to the network operator.

5 16. A digital content downloading system using a network,
according to claim 15, wherein the information designating
the desired digital content and the desired digital content
transmission condition are sent from the consumer to the
digital content retailer through the network or a telephone
10 line.

17. A digital content downloading system using a network,
according to claim 15, wherein the desired digital content
is a music file, a video file or a game software title.

15 18. A digital content downloading system using a network
in which digital content is downloaded, comprising the
steps of:

making a network operator managing a network accept a
20 reservation of the network according to a digital content
transmission condition sent from a digital content
retailer;

making the network operator inform the digital content
retailer of the network reservation;

25 making the network operator download a particular
digital content transmitted from the digital content
retailer to a consumer through the reserved network
according to the network reservation; and

30 making the network operator receive a transmission
charge corresponding to the digital content transmission

condition from the digital content retailer.

19. A digital content downloading system using a network,
according to claim 18, wherein the transmission charge is
5 a charge corresponding to a communication quality of a
downloading service of the particular digital content, and
the consumer directly pays a network access charge
different from the transmission charge to the network
operator.

20. A digital content downloading system using a network,
according to claim 18, wherein the step of making the
network operator download the particular digital content
includes:

15 making the network operator manage a digital content
transmission time period from a transmission start notice
sent from the digital content retailer to a transmission
completion notice sent from the digital content retailer;
and

20 making the network operator send a time-out notice to
the digital content retailer, in cases where the digital
content transmission time period exceeds a prescribed
value, to make the digital content retailer forcedly
terminate the downloading of the particular digital
25 content.

21. A digital content downloading system using a network,
according to claim 18, wherein the particular digital
content is a music file, a video file or a game software
30 title.

22. A digital content downloading system using a network in which digital content is downloaded, comprising the steps of:

- 5 making a digital content retailer receive information designating a desired digital content, a desired digital content transmission condition and personal information and payment information of a consumer from the consumer;
- 10 making the digital content retailer reserve a network managed by a network operator according to the desired digital content transmission condition sent from the consumer;
- 15 making the digital content retailer download the desired digital content designated by the information to the consumer through the network according to the network reservation informed by the network operator;
- 20 making the digital content retailer collect a charge for the desired digital content, in which a transmission charge corresponding to the desired digital content transmission condition is included, from a bank according to an authentication of the consumer which is performed by the bank according to the personal information and the payment information of the consumer; and
- 25 making the digital content retailer pay the transmission charge to the network operator.

23. A digital content downloading system using a network, according to claim 22, wherein the information designating the desired digital content, the desired digital content transmission condition and the personal information and

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the payment information of the consumer are sent from the consumer to the digital content retailer through the network or a telephone line.

5 24. A digital content downloading system using a network, according to claim 22, further comprising the step of:

making the consumer deposit money in his or her account of the bank before the information designating the desired digital content, the desired digital content transmission condition and the personal information and the payment information of the consumer are sent from the consumer to the digital content retailer, wherein the step of making the digital content retailer collect a charge includes:

10 15 making the bank pay out the charge for the desired digital content including the transmission charge corresponding to the desired digital content transmission condition from the account of the consumer.

20 25. A digital content downloading system using a network, according to claim 22, wherein the step of making the digital content retailer collect a charge is performed before the step of making the digital content retailer download the desired digital content designated by the information to the consumer.

25 26. A digital content downloading system using a network, according to claim 25, wherein the step of making the digital content retailer download the desired digital content includes:

making the digital content retailer receive a reception impossible notice sent from the consumer in cases where the consumer fails in receiving the desired digital content;

5 making the digital content retailer send a transmission termination notice to the network operator in response to the reception impossible notice to make the network operator terminate the transmission of the desired digital content; and

10 making the digital content retailer repay the charge for the desired digital content including the transmission charge corresponding to the desired digital content transmission condition to the bank in response to the reception impossible notice.

15 27. A digital content downloading system using a network, according to claim 25, wherein the step of making the digital content retailer download the desired digital content includes:

20 making the digital content retailer receive a reception impossible notice sent from the consumer in cases where the consumer fails in receiving the desired digital content;

making the digital content retailer send a transmission termination notice to the network operator in response to the reception impossible notice to make the network operator terminate the transmission of the desired digital content;

25 making the digital content retailer receive second
30 information designating a second desired digital content

and a second desired digital content transmission condition from the consumer;

making the digital content retailer reserve the network managed by the network operator according to the second
5 desired digital content transmission condition sent from the consumer; and

making the digital content retailer download the second desired digital content designated by the second information to the consumer through the network according
10 to the network reservation informed by the network operator.

28. A digital content downloading system using a network,
according to claim 22, wherein the desired digital content
15 is a music file, a video file or a game software title.